

## LISTING OF THE CLAIMS

1.     **(Previously presented)**     A composition comprising a nucleic acid construct comprising:

a transgene flanked by two terminal repeat sequences, wherein the terminal repeat sequences are derived from piggyBac transposon; and

a nucleic acid sequence encoding a chimeric integrating enzyme under the control of a promoter element, the chimeric integrating enzyme comprising a DNA binding domain and an enzymatic integrating domain, wherein the DNA binding domain is derived from a zinc finger domain and wherein the enzymatic integrating domain is derived from piggyBac transposase.

2.     **(Withdrawn)** The composition of claim 1, wherein the promoter element is a promoter/enhancer.

3.     **(Withdrawn)** The composition of claim 1, wherein the promoter is a site-specific promoter.

4.     **(Withdrawn)** The composition of claim 3, wherein the site-specific promoter can be selected from at least the group consisting of the glial fibrillary acetic protein (GFAP) promoter, myelin basic (MBP) promoter, MCK promoter, NSE promoter, nestin promoter, synapsin promoter, Insulin 2 (Ins2) promoter, PSA promoter, albumin promoter, TRP-1 promoter, the tyrosinase promoter, the EIIA promoter, a promoter specific for breast tissue, such as the WAP promoter, a promoter specific for ovarian tissue, such as the ACTB promoter, or a promoter specific for bone tissue.

5.     **(Original)**     The composition of claim 1, wherein the promoter is inducible.

6.     **(Previously presented)**     The composition of claim 5, wherein the inducible promoter can be selected from at least the group consisting of human heat shock promoter, Egr-1 promoter, tetracycline-responsive promoter, cre-lox recombinase system, and the human glandular kallikrein 2 (hK2) promoter.

7.     **(Cancelled)**

8.     **(Cancelled)**

9.     **(Cancelled)**

10.    **(Cancelled)**

11. **(Cancelled)**
12. **(Cancelled)**
13. **(Cancelled)**
14. **(Cancelled)**
15. **(Previously presented)** The composition of claim 1, wherein the DNA-binding domain is a host-specific DNA binding domain.
16. **(Cancelled)**
17. **(Cancelled)**
18. **(Previously presented)** The composition of claim 15, wherein the host-specific DNA binding domain is fused to the N-terminus of the enzymatic integrating domain.
19. **(Withdrawn)** The composition of claim 15, wherein the host-specific binding domain is fused to the C-terminus of the enzymatic integrating domain.
20. **(Previously presented)** The composition of claim 1, wherein the nucleic acid sequence encoding the chimeric integrating enzyme is located outside the terminal repeats.
21. **(Cancelled)**
22. **(Cancelled)**
23. **(Original)** The composition of claim 1, further comprising a homologous sequence that is homologous to the host DNA.
24. **(Withdrawn)** The composition of claim 23, wherein the homologous sequence is located outside the terminal repeats.
25. **(Withdrawn)** The composition of claim 1, further comprising a protein binding sequence and a separate nucleic acid encoding two DNA binding domains.
26. **(Withdrawn)** The composition of claim 1, further comprising a protein binding sequence and a separate nucleic acid encoding a DNA binding domain and a protein-binding domain.